

CLAIMS

1. A treating composition for treating one or more shoes, said treating composition comprising one or more benefit agents that imparts one or more desired benefits to the one or more shoes when the treating composition is applied directly or indirectly to the one or more shoes prior to and/or during and/or after washing the one or more treated shoes with or in an aqueous medium, wherein said treating composition is formulated so that any damage as a result of washing the one or more shoes with or in an aqueous medium containing the treating composition is reduced compared to washing the one or more shoes with or in an aqueous medium free of the treating composition.
2. The treating composition according to Claim 1 wherein the one or more benefit agents is selected from the group consisting of: cleaning agents, conditioning agents, disinfecting agents, antibacterial agents, antimicrobial agents, antifungal agents, odor control agents, waterproofing agents, soil release agents, brightening agents, alkaline pH modifiers, perfume, and mixtures thereof.
3. The treating composition according to Claim 2 wherein the cleaning agents are selected from the group consisting of: one or more surfactants, calcium/magnesium removal agents, alkaline pH modifiers, soil release agents, enzymes, and mixtures thereof.
4. The treating composition according to Claim 3 wherein the one or more calcium/magnesium removal agents are selected from the group consisting of polycarboxylates, polyacrylates, salts of polyacrylic acids, acrylate/maleate copolymers, salts of acrylate/maleic acid copolymers, citrates, ether polycarboxylates, oxydisuccinate, polyaspartates, polyglycolates and mixtures thereof.
5. The treating composition of Claim 4 wherein the one or more calcium/magnesium removal agents are selected from the group consisting of: polyacrylates, salts of polyacrylic acids, acrylate/maleate copolymers, salts of acrylate/maleic acid copolymers and mixtures thereof.
6. The treating composition of Claim 4 wherein the one or more calcium/magnesium removal agents are selected from the group consisting of: polyacrylates, salts of polyacrylic acids, acrylate/maleate copolymers, salts of acrylate/maleic acid copolymers and mixtures thereof wherein the average molecular weight is less than about 100,000.

7. A treating composition according to Claim 1 wherein the one or more benefit agents comprise Ca/Mg removal agents which have a molecular weight of greater than about 500.

5 8. A treating composition of Claim 1 which comprises no more than about 30% by weight of the treating composition of chromium-binding agents that are capable of binding  $\text{Cr}^{3+}$  with a log K binding constant of more than about 12.

9. The treating composition of Claim 2 wherein the cleaning agents comprise one or  
10 more surfactants, and the one or more surfactants are selected from the group consisting of: anionic, nonionic, cationic, zwitterionic, and amphophilic surfactants and mixtures thereof.

10. The treating composition of Claim 9 wherein the one or more surfactants are  
15 selected from the group consisting of anionic surfactants, nonionic surfactants and mixtures thereof.

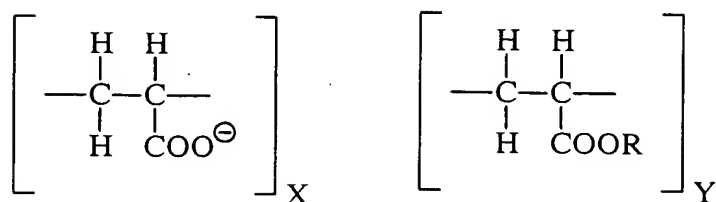
11. The treating composition of Claim 9 wherein at least some of the one or more  
surfactants are nonionic surfactants comprising C<sub>8</sub>-C<sub>18</sub> alkyl ethoxylates, with an average  
degree of ethoxylation from about 5 to about 15 moles of ethylene oxide per mole of  
20 alcohol, and the treating composition contains from about 1% to about 80% by weight of nonionic surfactant.

12. The treating composition of Claim 2 wherein the cleaning agents comprise one or  
more surfactants and one or more calcium/magnesium removal agents selected from the  
25 group consisting of polyacrylates, salts of polyacrylic acids, acrylate/maleate copolymers, salts of acrylate/maleic acid and mixtures thereof

13. The treating composition of Claim 12 wherein the surfactants comprise nonionic  
surfactants.

30 14. The treating composition according to Claim 2 wherein the conditioning agents are selected from the group consisting of: acrylic syntans and other hydrophobically modified polymers, silicones, fluorocarbons, fatliquors, lecithin, fluoropolymers, sucrose polyesters, quaternary ammonium salts, oils, waxes and mixtures thereof.

35 15. The treating composition according to Claim 14 wherein the acrylic syntans are selected from acrylic syntans having the formula:



wherein R is independently C<sub>8</sub> - C<sub>20</sub> alkyl, and X and Y are independent integers, and the ratio of X/Y is from about 0.05 to about 100.

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16. The treating composition according to Claim 2 wherein the conditioning agents comprise one or more hydrophilic units and one or more hydrophobic units such that the ratio of hydrophilic units to hydrophobic units is from about 0.01 to about 100.

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17. The treating composition of Claim 1 wherein the one or more benefit agents are selected such that the ratio of the water absorption into an interior surface of the one or more shoes treated by the treating composition to the water absorption into the interior surface prior to treatment with the treating composition is greater than about 0.1.

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18. The treating composition of Claim 1 wherein the one or more benefit agents are selected such that the ratio of the friction between a surface of the one or more shoes treated by the treating composition and a second surface to the friction between the surface prior to treatment with the treating composition and the second surface is greater than about 0.7.

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19. The treating composition of Claim 1 wherein said treating composition is applied: to one or more interior surfaces of the one or more shoes; to one or more exterior surfaces of the one or more shoes; or both.

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20. The treating composition of Claim 1 which has a pH, as determined in a 10% aqueous solution of the neat treating composition, in the range of from about 2.5 to about 11.

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21. The treating composition of Claim 20 which has a pH, as determined in a 10% aqueous solution of the neat treating composition, in the range of from about 5 to about 10.

22. The treating composition of Claim 21 which has a pH, as determined in a 10% aqueous solution of the neat treating composition, in the range of from about 6 to about 9.

23. The treating composition of Claim 1 which comprises a conditioning composition that has a pH, as determined in a 10% aqueous solution of the neat conditioning composition, that is in the range of from about 2.5 to about 9.

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24. The treating composition of Claim 23 which comprises a conditioning composition that has a pH, as determined in a 10% aqueous solution of the neat conditioning composition, that is in the range of from about 3 to about 8.

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25. The treating composition of Claim 24 which comprises a conditioning composition that has a pH, as determined in a 10% aqueous solution of the neat conditioning composition, that is in the range of from about 3.5 to about 7.

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26. The treating composition of Claim 1 which comprises a cleaning composition that has a pH, as determined in a 10% aqueous solution of the neat cleaning composition, in the range of from about 5 to about 11.

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27. The treating composition of Claim 26 which comprises a cleaning composition that has a pH, as determined in a 10% aqueous solution of the neat cleaning composition, in the range of from about 6 to about 10.

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28. The treating composition of Claim 27 which comprises a cleaning composition that has a pH, as determined in a 10% aqueous solution of the neat cleaning composition, in the range of from about 7 to about 10.

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29. The treating composition according to Claim 2 wherein the disinfecting agent is selected from the group consisting of: quaternary ammonium salts, saturated and unsaturated C<sub>8</sub> to C<sub>11</sub> fatty acids, phenols and their salts, o-phenyl phenol and its salts, t-amyl phenol and its salts, alkyl phenols and their salts, trichlocarbanilide, 4-chloro-3,5-dimethylphenol and its salts, chlorhexidine, phospholipids, thymol, eugenol, geraniol, oil of lemon grass, limonene, and mixtures thereof.

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30. The treating composition according to Claim 2 wherein the disinfecting agent at least partially comprises a C<sub>8</sub>-C<sub>10</sub> fatty acid, and is used at a pH < about 5.5.

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31. The treating composition according to Claim 2 wherein the disinfecting agent is selected from the group consisting of: (1) benzalkonium chlorides and/or substituted

benzalkonium chlorides; (2) dialkyl quaternary; (3) N-(3-chloroallyl) hexaminium chlorides; (4) benzethonium chloride; (5) methylbenzethonium chloride; (6) cetylpyridinium chloride.

5 32. The treating composition according to Claim 2 wherein the disinfecting agent is selected from the group consisting of: chlorhexidene and its salts, or polyhexamethylene biguanide hydrochloride and its salts.

10 33. The treating composition according to Claim 2 wherein the disinfecting agent is selected from the group consisting of tetraacetyl ethylene diamine (TAED), benzoylcaprolactam (BzCL), 4-nitrobenzoylcaprolactam, 3-chlorobenzoylcaprolactam, benzoyloxybenzenesulphonate (BOBS), nonanoyloxybenzenesulphonate (NOBS), decanoyloxybenzenesulphonate (C<sub>10</sub>-OBS), benzoylvalerolactam (BZVL), octanoyloxybenzenesulphonate (C<sub>8</sub>-OBS), 4-[N-(nonanoyl) amino hexanoyloxy]-benzene  
15 sulfonate sodium salt (NACA-OBS), dodecanoyloxybenzenesulphonate (LOBS or C<sub>12</sub>-OBS), 10-undecenoyloxybenzenesulfonate (UDOBS or C<sub>11</sub>-OBS with unsaturation in the 10 position), and decanoyloxybenzoic acid (DOBA) wherein a peroxygen source is added to the bleach activator such that the mole ratio of peroxygen bleaching compound (as AvO) to bleach activator in the present invention is at least about 1:1.

20 34. A treating composition according to Claim 2 wherein the disinfecting agent is selected from the group of preformed peracids consisting of: phthalimido-peroxy-caproic acid; nononylamide of either peroxysuccinic acid or peroxyadic acid: N,N'-terephthaloyl-de(6-aminoperoxypropionic acid); N-lauroyl-6-aminoperoxypropionic acid; N-decanoyl-aminoperoxypropionic acid; N-nonanoyl-6-aminoperoxypropionic acid; and 6-decylamino-6-oxoperoxypropionic acid.

30 35. A post wash treating composition according to Claim 2 wherein the benefit agents are selected from the group consisting of: soil release agents, waterproofing agents, soil release polymers, and mixtures thereof.

36. A treating composition according to Claim 3 comprising enzymes selected from the group consisting of cellulases and proteases.

35 37. A treating composition according to Claim 1 which comprises a phosphorous-containing compound.

38. A treating composition according to Claim 2 further comprising an additional ingredient selected from the group consisting of: a spreading agent, an alkaline pH modifier, and an anti-foaming agent.

5 39. The treating composition according to Claim 2 comprising a brightening agent which is deposited on leather and/or the midsoles of shoes as evidenced by solution depletion of about 1% or greater without visible brightener staining.

40. The treating composition of Claim 39 wherein the brightening agent is selected  
10 from the group consisting of: coumarin derivative brighteners; oxazole brighteners; and benzoxazolyl brighteners.

41. The treating composition according to Claim 2 comprising a perfume wherein said  
15 perfume comprises at least about 25% of substantive perfume ingredients, by weight of the perfume composition.

42. A treating composition according to Claim 1 which at least partially comprises a  
20 conditioning composition and at least some of the one or more benefit agents associated with the treating composition comprise one or more conditioning agents that imparts a conditioning benefit to the one or more shoes.

43. A treating composition according to Claim 1 which at least partially comprises a  
25 cleaning composition and the one or more benefit agents associated with the treating composition comprise one or more cleaning agents that imparts a cleaning benefit to the one or more shoes.

44. A treating composition for treating one or more shoes according to Claim 1 wherein the treating composition comprises:

30 a) one or more cleaning agents; and  
b) one or more conditioning agents  
wherein cleaning benefits and/or conditioning benefits are imparted to the one or more shoes when the treating composition is applied to the one or more shoes prior to and/or during and/or after washing the one or more shoes.

35 45. A treating system for treating one or more shoes according to Claim 1 wherein the treating composition comprises:

a) a cleaning composition comprising one or more cleaning agents capable of being applied in a manner such that the one or more cleaning agents contacts one or more exterior surfaces of the one or more shoes; and

5 b) a conditioning composition physically and/or chemically separated from the cleaning composition of a) wherein the conditioning composition comprises one or more conditioning agents capable of being applied in a manner such that the one or more conditioning agents contacts one or more interior surfaces of the one or more shoes;

such that the cleaning composition and/or conditioning composition imparts cleaning benefits and/or conditioning benefits to the one or more shoes when the cleaning composition and/or conditioning composition are applied to the one or more shoes prior to  
10 and/or during and/or after washing the one or more shoes.

46. A treating composition according to Claim 1 comprising a cleaning composition which is in the form of a gel.  
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47. A treating composition according to Claim 1 comprising a conditioning composition which is in the form of a liquid.

48. The treating system according to Claim 45 wherein the cleaning composition has a  
20 pH that is greater than the pH of the conditioning composition.

49. The treating system according to Claim 45 wherein the cleaning composition has a pH, as determined in a 10% aqueous solution of the neat cleaning composition, that is that is in the range of from about 5 to about 11.  
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50. The treating system according to Claim 45 wherein the conditioning composition has a pH, as determined in a 10% aqueous solution of the neat conditioning composition, that is that is in the range of from about 2.5 to about 9.

30 51. The treating composition of Claim 1 wherein the one or more desired benefits endures washing of the one or more shoes.

52. The treating composition of Claim 1 wherein the one or more shoes comprise canvas, nylon, synthetic leather and/or natural leather-containing surfaces.  
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53. The treating composition of Claim 52 for treating shoes with natural leather-containing surfaces that it is essentially free of bleach, particularly chlorine bleach.

54. A treating composition according to Claim 1 further comprising a bleach scavenger.

55. A treating composition for treating one or more shoes, said treating composition comprising one or more benefit agents that imparts one or more desired benefits to the one or more shoes when the treating composition is applied to the one or more shoes prior to and/or during and/or after washing the one or more treated shoes, wherein the treating composition is essentially free of phosphates selected from the group consisting of sodium pyrophosphate, sodium tripolyphosphate, and mixtures thereof.

56. A liquid treating composition for cleaning canvas or mesh shoes comprising:  
a substantially nonaqueous liquid detergent containing a nonionic surfactant;  
a peroxygen source; and  
optionally, a bleach activator.

57. A method for treating one or more shoes comprising contacting the one or more shoes directly or indirectly with one or more treating compositions, each of which comprises one or more benefit agents that imparts one or more desired benefits to the one or more shoes when the treating composition is applied directly or indirectly to the one or more shoes prior to and/or during and/or after washing the one or more treated shoes with or in an aqueous medium, wherein said treating composition is formulated so that any damage as a result of washing the one or more shoes with or in an aqueous medium containing the treating composition is reduced compared to washing the one or more shoes with or in an aqueous medium free of the treating composition.

58. The method of Claim 57 wherein the one or more treating compositions comprises at least one component that comprises a conditioner, and said conditioner is applied to the inside of said one or more shoes.

59. The method of Claim 58 wherein the conditioner is applied in the wash cycle of a washing machine.

60. The method of Claims 57 wherein the one or more treating compositions comprises at least one component that comprises a cleaning composition, and said cleaning composition is applied to the outside of said one or more shoes.



61. The method of Claim 57 further comprises washing the one or more treated shoes with a wash solution.
- 5 62. The method of Claim 61 wherein the wash solution has a pH of from about 4 to about 10, and a temperature from about 40° F (5° C) to about 180° F (80° C).
63. The method of Claim 62 wherein the wash solution has a pH of from about 5 to about 10, and a temperature from about 50° F to about 150° F (66° C).
- 10 64. The method of Claim 62 wherein the wash solution has a pH of from about 6 to about 9, and a temperature from about 60° F (15° C) to about 100° F (40° C).
- 15 65. The method according to Claim 57 wherein the one or more treating compositions are in a form selected from the group consisting of: gels, liquids, solids, pastes, foams, sprays, aerosols, bars and mixtures thereof.
66. A method according to Claim 65 comprising a cleaning composition which is in the form of a gel.
- 20 67. A method according to Claim 65 comprising a conditioning composition which is in the form of a liquid.
- 25 68. The method according to Claim 57 which further comprises placing the one or more treated shoes in a containment bag, which may either be done by placing the one or more treated shoes in the same containment bag, or placing the one or more treated shoes in separate containment bags, and placing the bag or bags into a wash solution.
- 30 69. The method according to Claim 68 wherein:  
the containment bag(s) contain one or more treating compositions;  
the wash solution comprises one or more treating compositions; or  
the one or more treating compositions is in both the containment bag(s) and the wash solution.
- 35 70. A method of imparting one or more desired benefits to a shoe comprising applying an effective amount of one or more benefit agents provided by using the treating composition of Claim 1, with or without a washing process.

71. A shoe treatment kit comprising the following components:

- a) an article of manufacture comprising a treating composition for treating one or more shoes comprising one or more benefit agents in a package in association with instructions for use which direct a consumer to apply at least an effective amount of the one or more benefit agents to provide one or more desired benefits to the one or more shoes;
- b) a flexible container suitable for holding one or more of the shoes; and
- c) an outer package containing the components a) and b).

72. The shoe treatment kit according to Claim 71 wherein at least one of the following is the case with the components of the kit:

the article of manufacture is an applicator;

the flexible container is a bag;

the flexible container is reusable; or

the kit further comprises a post-treat article, which may comprise a treating composition comprising a release agent, and optionally, a film-forming polymer.

73. The shoe treatment kit according to Claim 71 wherein the applicator is a brush for applying the one or more treating compositions onto the one or more interior or exterior surfaces of the one or more shoes.

74. A product comprising a benefit agent-containing treating composition according to Claim 1, the product further including instructions for using the treating composition to treat a shoe, the instructions including the step of: contacting said shoe with an effective amount of said treating composition for an effective amount of time such that said composition treats said shoe.

75. A method of treating athletic shoes and other shoes with white painted natural leather surfaces before, during, or after manufacture, said method comprising applying a treating composition to at least a portion of the leather surfaces of the shoes and/or the midsoles of said shoes, wherein said treating composition comprises a brightening agent which is deposited on leather and/or the midsoles of shoes via solution depletion of about 1% or greater without visible brightener staining, and said brightening agent is selected from the group consisting of: coumarin derivative brighteners; oxazole brighteners; and benzoxazolyl brighteners.